

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P834561

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834561
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1HI-35-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

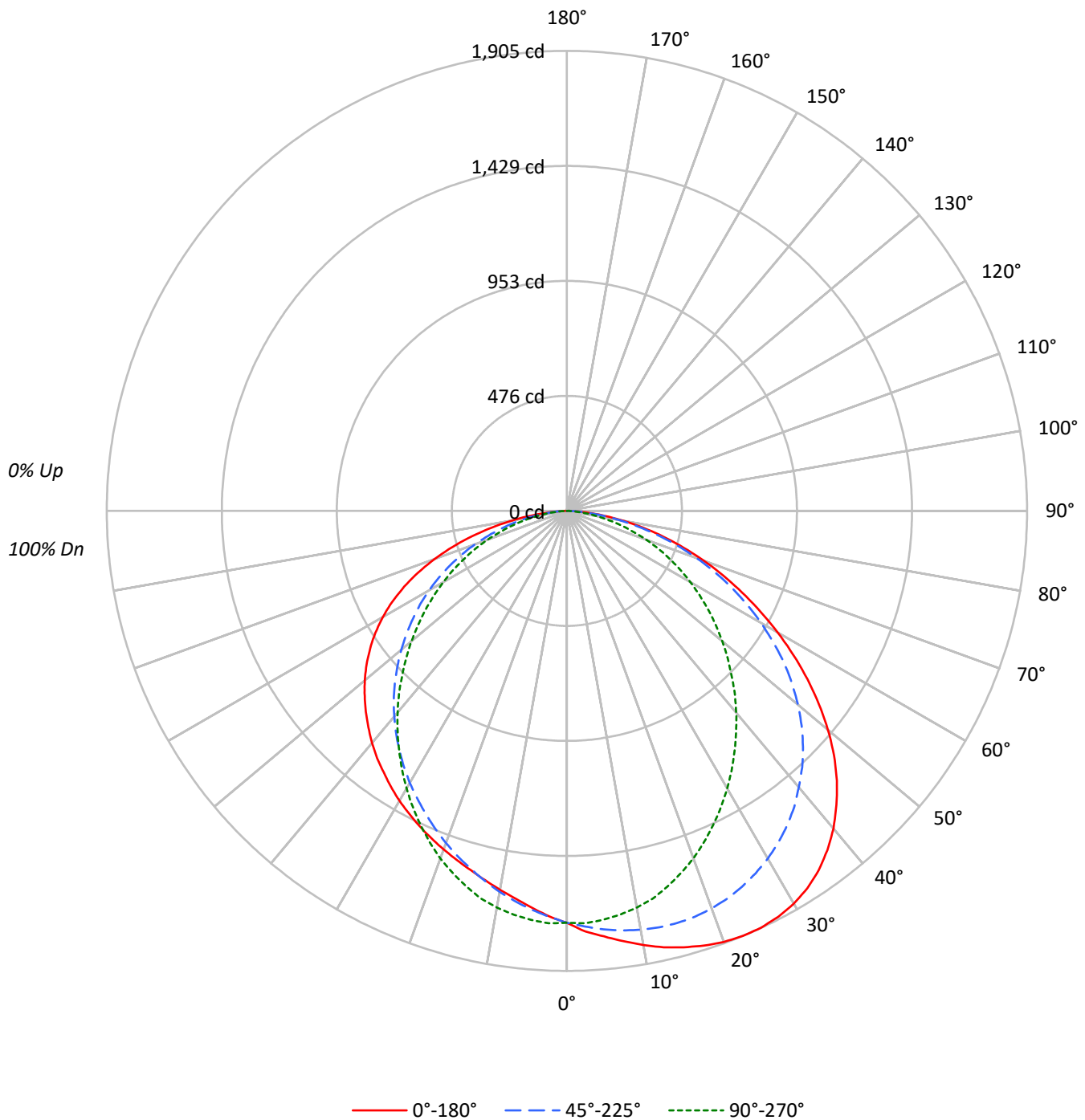
Lumens per Lamp: N/A
Luminaire Lumens: 5017.0 lumens
Efficiency: N/A
Efficacy: 114.0 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2295	2295	2295
5°	2389	2296	2228
10°	2494	2279	2176
15°	2606	2242	2145
20°	2720	2193	2136
25°	2826	2129	2140
30°	2919	2062	2153
35°	2985	1989	2171
40°	3015	1915	2203
45°	3007	1834	2239
50°	2954	1757	2286
55°	2853	1677	2333
60°	2714	1590	2369
65°	2548	1493	2365
70°	2371	1377	2295
75°	2153	1209	2116
80°	1849	993	1785
85°	1409	679	1226

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.8	3.2
10°-20°	467.1	9.3
20°-30°	715.6	14.3
30°-40°	873.4	17.4
40°-50°	913.3	18.2
50°-60°	826.6	16.5
60°-70°	626.0	12.5
70°-80°	348.9	7.0
80°-90°	84.2	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1344.5	26.8
0°-40°	2217.9	44.2
0°-60°	3957.9	78.9
0°-90°	5017.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5017.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1706	1706	1706	1706	1706	
5°	1769	1740	1700	1658	1650	171
15°	1871	1767	1610	1535	1540	531
25°	1904	1717	1434	1384	1441	878
35°	1817	1590	1211	1209	1322	1135
45°	1580	1382	964	1007	1177	1216
55°	1216	1098	715	778	995	1085
65°	800	753	469	533	743	794
75°	414	391	233	278	407	439
85°	91	80	44	59	79	110
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6
2.5°	1743.2	1735.0	1728.3	1730.9	1732.4	1727.2	1722.7	1723.5	1719.0	1727.6	1707.4
5°	1768.9	1761.5	1753.7	1756.6	1753.7	1745.8	1739.5	1737.6	1725.7	1730.5	1710.0
7.5°	1797.6	1789.4	1777.9	1781.2	1774.9	1760.4	1752.2	1747.3	1729.0	1729.4	1706.7
10°	1825.2	1818.1	1802.5	1804.7	1793.2	1773.8	1760.7	1754.0	1728.3	1724.6	1701.1
12.5°	1851.0	1841.3	1824.5	1825.6	1808.8	1783.1	1766.3	1756.6	1723.1	1711.9	1688.8
15°	1870.7	1861.4	1841.3	1840.9	1819.3	1785.7	1766.7	1753.3	1710.8	1693.3	1669.0
17.5°	1887.5	1878.9	1853.9	1853.2	1827.1	1784.6	1761.9	1745.1	1692.9	1671.3	1644.4
20°	1899.4	1890.8	1862.9	1860.3	1829.0	1779.0	1751.8	1730.5	1669.4	1643.7	1613.9
22.5°	1905.0	1896.4	1864.7	1861.0	1824.5	1767.8	1737.2	1712.3	1642.6	1609.0	1578.1
25°	1903.9	1895.7	1859.9	1856.2	1815.9	1751.0	1716.7	1688.0	1608.6	1569.1	1538.5
27.5°	1894.6	1888.2	1850.6	1845.7	1800.3	1728.3	1691.8	1660.1	1571.0	1527.0	1493.8
30°	1878.5	1873.7	1833.8	1829.3	1780.9	1703.3	1662.7	1626.2	1530.3	1480.8	1447.2
32.5°	1852.8	1848.3	1808.1	1804.0	1754.8	1671.3	1628.8	1591.1	1486.0	1431.2	1397.6
35°	1817.4	1814.8	1775.6	1771.2	1721.2	1634.7	1589.6	1548.2	1439.8	1377.9	1345.8
37.5°	1770.8	1770.8	1733.1	1728.3	1679.5	1590.0	1545.6	1501.6	1387.6	1321.9	1290.3
40°	1716.7	1721.6	1683.2	1678.3	1631.0	1541.9	1493.4	1447.2	1331.3	1263.0	1232.1
42.5°	1651.9	1656.4	1624.3	1619.8	1575.5	1486.4	1441.2	1390.9	1272.4	1203.0	1171.0
45°	1580.3	1586.3	1557.6	1554.2	1512.8	1425.6	1382.3	1331.3	1210.9	1140.4	1109.1
47.5°	1500.5	1508.4	1483.4	1481.5	1443.1	1363.3	1318.2	1266.4	1146.4	1075.2	1045.7
50°	1411.0	1422.2	1401.7	1401.7	1367.4	1288.0	1248.9	1197.1	1079.3	1008.1	979.0
52.5°	1315.2	1329.4	1314.1	1314.5	1286.5	1215.3	1174.7	1124.0	1009.2	939.1	912.2
55°	1216.1	1229.9	1220.2	1221.7	1199.7	1134.8	1097.9	1047.6	937.6	869.4	844.0
57.5°	1112.4	1127.3	1121.0	1124.0	1108.7	1050.6	1012.2	968.2	863.8	796.3	774.7
60°	1008.4	1022.6	1019.2	1023.3	1013.6	963.3	928.3	882.8	789.6	724.7	705.7
62.5°	903.3	916.3	915.6	920.1	914.9	873.1	841.8	803.0	712.8	653.1	635.6
65°	800.4	811.6	810.8	815.7	814.6	781.0	752.7	717.3	636.0	581.2	565.9
67.5°	700.5	709.8	707.2	712.8	714.3	687.4	662.8	631.2	562.9	509.6	496.6
70°	602.8	609.2	605.8	609.5	612.9	592.8	571.9	543.9	485.0	438.0	427.2
72.5°	507.0	511.5	506.3	510.0	513.0	498.4	481.3	457.1	408.2	367.6	358.6
75°	414.2	420.5	409.7	413.4	415.7	401.1	391.1	371.3	329.2	297.9	291.9
77.5°	324.3	328.1	322.1	320.6	322.1	311.7	303.8	288.5	256.9	231.1	227.4
80°	238.6	240.8	234.9	233.4	234.5	227.0	221.1	209.9	187.5	168.1	166.6
82.5°	159.9	161.0	155.8	154.3	155.1	152.8	145.8	137.9	127.5	111.1	110.7
85°	91.3	91.3	87.6	86.1	86.9	83.1	80.5	76.4	72.3	61.1	61.9
87.5°	33.6	33.6	31.7	31.3	35.0	30.9	29.8	28.0	29.1	23.1	24.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6	1705.6
2.5°	1713.0	1709.3	1705.9	1694.4	1699.2	1687.3	1686.5	1682.1	1678.7	1672.4	1680.6
5°	1707.4	1700.0	1690.3	1676.5	1680.6	1666.4	1663.4	1658.2	1653.7	1645.5	1651.9
7.5°	1698.5	1686.2	1670.9	1653.4	1659.0	1641.4	1637.0	1631.4	1627.6	1618.0	1623.5
10°	1685.4	1667.9	1650.0	1628.8	1632.9	1613.9	1608.3	1602.3	1598.9	1590.4	1596.0
12.5°	1665.3	1644.0	1619.8	1596.7	1601.2	1583.3	1575.8	1569.5	1568.4	1561.3	1568.0
15°	1639.2	1609.8	1584.8	1560.2	1565.4	1544.5	1541.2	1534.8	1536.7	1531.8	1540.0
17.5°	1606.0	1572.1	1544.9	1518.4	1523.6	1506.1	1503.5	1500.5	1502.4	1501.6	1510.6
20°	1568.7	1531.5	1500.1	1474.1	1477.0	1463.2	1464.4	1463.6	1467.3	1471.4	1483.7
22.5°	1526.6	1484.5	1451.7	1424.8	1429.3	1417.4	1422.6	1424.1	1430.4	1439.8	1455.4
25°	1479.3	1434.2	1399.9	1374.5	1378.6	1370.8	1379.7	1383.5	1393.5	1409.2	1425.2
27.5°	1429.7	1382.0	1345.4	1321.2	1329.0	1321.2	1334.6	1342.1	1357.4	1374.5	1394.3
30°	1377.1	1327.5	1289.9	1268.3	1275.7	1268.6	1290.3	1300.3	1315.6	1339.1	1362.6
32.5°	1321.9	1269.8	1232.9	1216.1	1221.3	1220.2	1244.4	1255.6	1276.1	1302.9	1327.9
35°	1265.3	1210.9	1173.6	1159.4	1165.7	1167.2	1196.3	1209.4	1231.7	1264.2	1291.0
37.5°	1206.8	1151.2	1114.7	1103.1	1108.7	1114.3	1148.2	1161.3	1186.6	1222.0	1251.5
40°	1146.0	1090.4	1054.7	1045.3	1050.9	1056.9	1093.8	1111.7	1139.3	1177.7	1209.7
42.5°	1084.5	1028.9	994.3	987.5	993.1	1004.7	1043.8	1060.6	1089.7	1132.2	1167.6
45°	1021.8	964.1	933.9	928.6	934.6	948.0	986.4	1006.6	1037.5	1084.1	1122.1
47.5°	958.5	902.2	873.5	870.1	876.1	891.0	933.5	951.8	984.6	1034.1	1075.2
50°	894.3	839.5	812.0	810.8	816.4	832.5	873.1	894.7	928.6	984.2	1026.3
52.5°	829.5	776.9	751.9	751.9	757.2	773.6	814.6	836.9	872.0	930.5	977.1
55°	764.6	714.7	690.8	692.7	700.1	714.3	754.2	777.7	813.1	873.8	923.1
57.5°	699.7	652.4	630.8	633.4	640.5	654.6	693.8	720.3	752.3	815.3	865.6
60°	635.6	590.9	571.9	574.9	581.2	595.4	636.0	658.7	690.8	754.9	805.2
62.5°	570.8	530.1	512.2	516.0	521.5	535.7	574.1	596.1	627.8	690.8	741.5
65°	506.6	469.0	453.7	457.4	462.6	475.7	511.9	533.1	563.3	624.8	673.3
67.5°	443.3	409.0	396.3	400.0	404.1	416.4	446.2	469.4	497.7	556.2	602.1
70°	380.6	350.1	338.9	342.6	346.3	357.5	383.6	404.9	431.0	484.6	527.1
72.5°	318.7	288.9	283.3	286.7	289.7	299.4	324.3	341.1	363.9	411.6	448.1
75°	258.4	232.6	228.9	232.3	234.9	242.3	263.2	277.7	296.7	338.1	368.0
77.5°	200.2	178.6	177.1	179.7	182.3	187.5	203.9	219.2	234.1	264.7	291.2
80°	145.8	128.2	128.2	130.9	130.1	136.4	148.0	160.3	171.1	193.1	212.5
82.5°	96.2	82.4	84.3	86.1	87.2	89.8	96.9	106.2	113.0	126.4	139.1
85°	53.3	44.0	45.9	47.3	46.6	49.6	53.3	58.9	62.3	68.6	75.3
87.5°	19.8	16.4	16.8	17.9	18.6	20.1	20.1	23.5	23.9	24.6	26.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	1705.6	1705.6	1705.6
2.5°	1664.9	1673.9	1680.6
5°	1636.2	1643.7	1649.6
7.5°	1608.3	1615.0	1620.2
10°	1581.8	1589.2	1593.0
12.5°	1554.6	1563.2	1566.1
15°	1527.7	1536.3	1540.0
17.5°	1500.1	1511.3	1515.4
20°	1474.4	1488.6	1491.9
22.5°	1448.3	1462.9	1467.0
25°	1420.0	1437.1	1441.2
27.5°	1389.8	1410.3	1414.4
30°	1359.6	1382.0	1386.1
32.5°	1327.2	1351.4	1355.1
35°	1293.2	1317.5	1321.9
37.5°	1255.6	1282.1	1291.0
40°	1216.4	1245.2	1254.5
42.5°	1175.4	1206.8	1216.4
45°	1131.4	1165.7	1176.9
47.5°	1087.1	1125.9	1135.5
50°	1039.0	1080.4	1091.9
52.5°	988.7	1033.8	1045.3
55°	936.5	982.0	994.6
57.5°	879.8	926.8	940.2
60°	820.5	867.5	880.2
62.5°	759.8	802.3	814.6
65°	691.9	731.8	743.0
67.5°	620.0	656.5	665.8
70°	543.5	575.2	583.4
72.5°	463.8	485.8	496.6
75°	381.4	398.9	407.1
77.5°	298.6	310.9	317.6
80°	217.7	224.8	230.4
82.5°	142.4	145.4	149.5
85°	76.8	76.8	79.4
87.5°	26.1	25.0	26.1
90°	0.0	0.0	0.0

(END OF REPORT)